



UNITED STATES PATENT AND TRADEMARK OFFICE

clm

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,549	04/01/2004	Roman M. Krzanowski	03-1512	7157
25537	7590	09/11/2007		
VERIZON PATENT MANAGEMENT GROUP 1515 N. COURTHOUSE ROAD SUITE 500 ARLINGTON, VA 22201-2909			EXAMINER DUONG, CHRISTINE T	
			ART UNIT 2616	PAPER NUMBER
			NOTIFICATION DATE 09/11/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@verizon.com

Office Action Summary	Application No. 10/815,549	Applicant(s) KRZANOWSKI ET AL.	
	Examiner Christine Duong	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) ✓ | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 3 and 15 are objected to because of the following informalities: replace "used" in claim 3 line 5 and in claim 15 line 5 with --use--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 13-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Okamura et al. (PG Pub US 2004/0184483 A1).

Regarding claims 1 and 13, Okamura et al. discloses a centralized method and communications system (fig. 5) comprising:

a first node (router 1, fig. 5);

a second node coupled to the first node by a first link (router 2 coupled to router 1, fig. 5);

a third node coupled to the second node by a second link (router 3 coupled to router 2, fig. 5);

a fourth node coupled to the third node by a third link (router 4 coupled to router 3, fig. 5); and

a control node coupled to at least one of said first, second, third (network control device 10 coupled to router 1, router 2 and router 3, fig. 5), and further nodes, said control node including and maintaining a set of link bandwidth utilization information, the set of link bandwidth utilization information including bandwidth utilization statistics for at least each of the first, second and third nodes ("the network control device 10 includes a statistical information collecting unit 11 for collecting pieces of statistical information about the bandwidths in a way that communicates with each of the routers in the network" [0137] lines 3-6 and "the network information database 12 is stored with respective pieces of bandwidth information of the link's physical bandwidth (WL), the bandwidth reserved for the GS flow(WG), the bandwidth reserved for the BES flow(WB), the bandwidth actually used for the GS flow(Wg), and the bandwidth actually used for the BES flow(Wb)" [0141] lines 3-9);

said control node further including: means for receiving a service request corresponding to the first node ("the user terminal 20 side notifies the network control device 10 of a request for the bandwidth, etc" [0145] lines 3-4) and to determine from said maintained set of link bandwidth utilization information if there is sufficient bandwidth available on at least said second and third links to satisfy said service request ("the route calculation unit 14 for GS executes the searching process as to whether or not there is the route that meets the quality with respect to the notified quality parameter (S104). This searching process uses pieces of link statistical

Art Unit: 2616

information such as a link using ratio, a link bandwidth reservation value, a link delay, etc., which are stored on the statistical information database" [0213] lines 1-7).

Regarding claims **2 and 14**, Okamura et al. discloses everything claimed as applied above (see claims 1 and 13). In addition, Okamura et al. discloses means for signaling at least one of said first, second, third and fourth nodes that said service request has been granted when it is determined from said maintained set of link bandwidth utilization information that there is sufficient bandwidth available to satisfy said service request ("one example of an acceptance result screen showing that the network control device 10 accepted a user request on a user request screen 100a" [0146] lines 1-3); and

means for updating link bandwidth utilization statistics for at least two of said first, second and third links to reflect bandwidth that will be utilized by the requested service that was granted ("the route control unit 14 notifies the user request processing unit that the route search has been successful, and updates the bandwidth reservation value, etc. with respect to each of the links on the set route on the network information database 12 (S109). The user request processing unit 13 notifies the user terminal that the set-up of the path has been completed" [0217] lines 5-11).

Regarding claims **3 and 15**, Okamura et al. discloses everything claimed as applied above (see claims 1 and 13). In addition, Okamura et al. discloses means for generating link bandwidth utilization information corresponding to said second link from an estimate of bandwidth that will be used on said second link by services over which said control node does not have admission control and a sum of services which will

Art Unit: 2616

used said second link which said control node authorized ("the load balancing control unit 15 calculates allocations of individual flows to the plurality of routes. At this time, the load balancing control unit 15 calculates a load balancing process on the basis of the statistical information collected by the network control device 10 or the request bandwidth information stored on the network information database 12 by the user request processing unit 13" [0185] lines 3-9 and "the load balancing control unit 15 calculates a load state of the path set within the network at the present, and judges whether or not the load state of the path comes to a state of congestion.

Simultaneously, the load balancing control unit 15 calculates a balancing ratio of the BES flow between the routes" [0186] lines 1-6).

Regarding claims 4 and 16, Okamura et al. discloses everything claimed as applied above (see claims 3 and 15). In addition, Okamura et al. discloses said link bandwidth utilization information corresponding to said second link is further generated as a function of a link utilization scaling factor ("the load balancing control unit 15 calculates a balancing ratio of the BES flow between the routes" [0186] lines 5-6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al. further in view of Riggan et al. (US Patent No. 5,898,673).

Regarding claims **5 and 17**, Okamura et al. discloses everything claimed as applied above (see claim 4 and 16). However, Okamura et al. fails to specifically disclose that best effort Internet traffic is carried over said second link and where said link bandwidth utilization information corresponding to said second link is further generated as a function of the physical link capacity of links used to couple Internet service users to said second link and an average of the physical link capacity which is used over a period of time by said users for Internet service, as claimed.

Nevertheless, Riggan et al. teaches "if the signal from the network management system 206 indicates that the QoS threshold is exceeded, then at least a first portion of the data, e.g., excess cells, are routed to node 300b via one or more of the secondary networks 212a-212c. The particular secondary network is chosen based upon the type of data which is to be transmitted. More particularly, the voice, data and video streams may be classified according to adaptation layer type" (Riggan et al. column 4, lines 56-63) and further "AAL Type 3/4 data streams may be routed to a PBX via a PPP (point to point protocol) link, to an ISDN router via the PPP link, an ISDN public network via a PPP link, or via a LAN router Type 3/4 data streams may be routed to a frame relay access device, a frame relay network, an X.25 network, any of a variety of wireless data networks, Internet or other miscellaneous analog/digital data networks. Finally, AAL Type 5 data streams may similarly be routed to frame relay access devices, frame relay networks, X.25 networks, the Internet, wireless data networks and other miscellaneous analog/digital data networks. It is noted that these lists are not exclusive and are

Art Unit: 2616

exemplary only. A variety of other secondary networks suitable for transporting traffic of the particular AAL types is contemplated" (Riggan et al. column 5, lines 10-23).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Okamura et al's invention to carry best effort Internet traffic over the second link and the link bandwidth utilization information is generated as a function of the physical link capacity of the links and an average of the physical link capacity because "a quality of service (QoS) traffic contract bandwidth limit and a corresponding QoS threshold" can be established (Riggan et al. column 4, lines 36-37).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al. and Riggan et al. further in view of Raisanen et al. (PG Pub US 2003/0152028 A1).

Regarding claim 6, Okamura et al. and Riggan et al. disclose everything claimed as applied above (see claim 5). However, Okamura et al. and Riggan et al. fails to specifically disclose said control node generates a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links, when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available due to best effort traffic on said one of said first, second and third links, as claimed.

Nevertheless, Raisanen et al. teaches "the QM may carry this out by changing the parameter values of the traffic shaper of the access node for example by reducing

Art Unit: 2616

the guaranteed bandwidth of best-effort traffic to 128 kbit/s. However, the guaranteed bandwidth of real-time traffic should not be changed during an IP call because that might have radical effects on the IP call itself" (Raisanen et al. [0060] lines 1-10).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to reduce the amount of bandwidth to best effort traffic on one of the first, second and third links if a service requiring a guaranteed amount of bandwidth is not available because this would accommodate when "measurements show that the QoS situation in the IP network suddenly deteriorates (for example, the delay increases)" (Raisanen et al. [0060] lines 1-2).

7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamura et al. further in view of Adamczyk et al (PG Pub US 2004/0228356 A1).

Regarding claim 7, Okamura et al. discloses everything claimed as applied above (see claim 1). In addition, Okamura et al. discloses when it is determined from said maintained set of link bandwidth utilization information that there is insufficient bandwidth available to satisfy said service request ("the route that meets the user request is not discovered as the result of the route search by the route control unit 14, the route control unit 14 notifies the user request processing unit 13 that the route search resulted in being unsuccessful for the user request processing unit 13 (S105). Then, the user request processing unit 13 notifies the user terminal that the acceptance was rejected" [0214] lines 1-8).

However, Okamura et al. fails to specifically disclose that determining if a user to whom said service request corresponds is using other services which can be terminated to provide the bandwidth required to satisfy said service request, as claimed.

Nevertheless, Adamczyk et al. teaches "establish priorities and bandwidth allocation among multiple services and/or applications so as to customize the content delivery according to the users' and/or providers' preferences" (Adamczyk et al. [0007] lines 11-14) where "a strict priority relationship among the applications flows is used to manage simultaneous application interactions" (Adamczyk et al. [0153] lines 9-11) and further "If the user experience for either the video stream or the game is unacceptable, the user will have to make their own admission control decision and pause or shut down the one they wish to have lower priority" (Adamczyk et al. [0154] lines 18-22).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to allow a user to determine the termination of the user's other services to provide the bandwidth required to satisfy Okamura et al.'s service request because "services and/or applications may be delivered over a single network connection, such as a DSL line" (Adamczyk et al. [0007] lines 7-8).

Regarding claim 8, Okamura et al. and Adamczyk et al. disclose everything claimed as applied above (see claim 7). In addition, Okamura et al. discloses when it is determined that said user to whom said service request corresponds is not using other services which can be terminated to provide the bandwidth required to satisfy said service request, operating the control node to send a message denying said service request ("the network control device 10 rejects the acceptance of the user request. In

Art Unit: 2616

this case, the user selects, on the acceptance result screen 101b, whether to make a request for other content or to reserve a receipt of the content on the basis of this request after an elapse of a predetermined time" [0146] lines 10-15 and further "where the route that meets the user request is not discovered as the result of the route search by the route control unit 14, the route control unit 14 notifies the user request processing unit 13 that the route search resulted in being unsuccessful for the user request processing unit 13 (S105). Then, the user request processing unit 13 notifies the user terminal that the acceptance was rejected. After notifying that the user terminal of the rejection of the acceptance, the network control device 10 moves to a process in S109" ([0214]).

Regarding claim 9, Okamura et al. and Adamczyk et al. disclose everything claimed as applied above (see claim 7). However, Okamura et al. fails to specifically disclose that when it is determined that said user to whom said service request corresponds is using other services which can be terminated to provide the bandwidth required to satisfy said service request, presenting the user with the operation of terminating the services being provided to said user which can be used to provide the bandwidth required to satisfy the service request, as claimed.

Nevertheless, Adamczyk et al. teaches "establish priorities and bandwidth allocation among multiple services and/or applications so as to customize the content delivery according to the users' and/or providers' preferences" (Adamczyk et al. [0007] lines 11-14) where "a strict priority relationship among the applications flows is used to manage simultaneous application interactions" (Adamczyk et al. [0153] lines 9-11) and

Art Unit: 2616

further "If the user experience for either the video stream or the game is unacceptable, the user will have to make their own admission control decision and pause or shut down the one they wish to have lower priority" (Adamczyk et al. [0154] lines 18-22).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to allow a user to determine the termination of the user's other services to provide the bandwidth required to satisfy Okamura et al.'s service request because "services and/or applications may be delivered over a single network connection, such as a DSL line" (Adamczyk et al. [0007] lines 7-8).

Allowable Subject Matter

8. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Citations of Pertinent Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ginis et al (PG Pub US 2003/0086514 A1) discloses dynamically controlling a digital communication system, such as a DSL system, collect information about digital communication lines in the system and adaptively and/or dynamically determine line and signal characteristics of the digital communication lines, including interference effects.

Byers (US Patent No. 6,975,594 B1) discloses providing controlled broadband access bandwidth allocation adjustment service.

Moore (PG Pub US 2005/0226249 A1) discloses dynamic allocation of network resource through the use of a measurement-based estimator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Duong whose telephone number is (571) 270-1664. The examiner can normally be reached on Monday - Friday: 830 AM-6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTD 08/20/2007

CTD

Seema S. Rao
SEEMA S. RAO 8/29/07
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600